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Two thousand people bonded by their allegiance to Atari computers converged at the Southfield, Mich., Hilton for the very successful Atari MAGIC Show Aug. 28-30, prompting Atari's Neil Harris to call it "one of the better shows we've attended."

"Next time make it five days," the usually serious Harris quipped. Considering the trail of controversy Atari had left behind at other 1987 shows and the cancellation of the Chicago show, this was a turning point for Atari. The mood of the show could be described as effervescent-enthusiasm was overflowing. It was one big blast- Friday night, all day Saturday, and Sunday. On Saturday morning people were entering the show before volunteers were set up to handle them. Some were still entering the show near closing time Sunday, and when one latecomer was turned away as exhibitors were carrying out hardware, he sighed, "Oh well, I'm always late for everything."

Although every exhibitor and user group seemed to be making profits, money did not seem to be the driving force here. Fellowship, friendship, and help seemed to dominate like the old spirit of Atari. User group coordinator Sandi Austin commented how friendly everyone was. The fellowship extended after hours to a pizza-beer blast for exhibitors, and Sandi's presence was welcomed. At the party WACO reps met ICD's Keith Ledbetter, author of the just released BBS Express for the ST. Keith said the program was a "result of his obsession for a BBS program that doesn't crash." (This phenomenal BBS program will be demoed at the October WACO meeting. It allows 32 separate sigs and at 1200 baud type zips across the screen like 2400 baud.)

Walt Miller, Atari's new but unannounced head of the computer division, kept a very low profile, refusing to speak publicly (Atari now has somebody who came from a big

computer company other than Commodore to try to clean up the act), but he had to be pleased with what he observed. Atari apparently realizes that its rapport with dealers is at ebb tide because one official was overheard lamenting "We've been shooting ourselves in the foot," and he promised radical marketing changes. (Interestingly, a WACO PRINTOUT editorial last spring warned, "Don't shoot yourself in the foot, Atari.")

The MAGIC and GAG user groups are to be commended for a first class expo organization. Each entrant had to have his ticket stamped at three different stations before he could put it into the door prize drawing, and that required a host of volunteers. Many vendors offered show specials, and during the last hour of the show one dealer was doing a brisk business when he posted a 75 percent off clearance on a large quantity of "old" software. Many of the big names in third party Atari wares were exhibiting there including Michtron, Abacus, ICD, Timeworks, Hybrid Arts, Alpha Systems (which is planning to market Pop-N-Rocker by WACO's own Jim Adamson), etc.

This was definitely the best Atari show ever attended by the WACO delegation that was praised by Sandi Austin as "so dedicated" for making a six hour trek to participate in the show. PACE also made the long trip, and WACO's across the county line neighbor even had the adjoining booth to WACO. WACO had the very first booth in the user group hallway so everybody who entered the show had to pass by WACO's sign "WACO IS EMULATOR COUNTRY." Yet there was no friction between WACO and Atari over emulators this time, and Neil Harris and a WACO rep actually shook hands. Neil said he had "no problem with WACO's approach in bringing the emulator to our attention." He claimed he had been misquoted in reports that he had called WACO "the enemy" or the "most hated user group." Impressively, however, he was man enough to admit

regret that "in the heat of things" he made some unkind public remarks about Darek Mihocka, author of the ST Transformer which WACO had so vehemently promoted. Obviously, there was a personality conflict between Neil and Darek. Neil said he was concerned that Atarians would be disappointed when the Transformer is finally available. Of course, he wasn't present when WACO conducted a seminar about the emulator, running its 40 minute videotape which concluded with Paperclip, the highly regarded 8-bit word processor, merrily typing on the ST screen. Sandi did express interest in seeing the videotape but she was just too busy throughout the show to spend time at the WACO booth where the Transformer was being continuously demoed via the VCR. She also said she had never heard anybody at Atari criticize WACO for its pro-emulator campaign.

Shades of CES, one dealer held a hospitality suite upstairs in the hotel. Suddenly, a small table was moved, a table lamp turned on, and everyone huddled closely around to see a strip show- no, not what you're thinking- a four meg ST being dissected. Only Atarians could be crazy enough to get so turned on by seeing a computer being taken apart. When the last screw was removed, a sudden hush fell over the audience, but the removal of the case revealed only a stamped metal RF jacket. After some effort the secrets of the four meg were exposed to the world. It has a built-in fan. The unusual square socket with four holes was bare because this ST had been brought across the border from nearby Canada where the first megas were being shipped without Blitters (with the renown chip being promised later for free). Atari Canada apparently decided it could wait no longer for GE to produce enough Blitter chips; the failure rate of chips is still reportedly high on each batch. Sandi seemed optimistic that the megas would be shipped in the US within a month and would include the Blitters.

(One report circulating around the show was that the FCC still hadn't approved the megas. If the Canadian shipments are any indication, the cheaper 2 meg machine may go the way of the 130ST. Atarians always want the most powerful machine they can get. Meanwhile, one dealer on the show floor was offering four meg upgrades for older ST's and accepting deposits to order the first megas available. Atari itself had the megas at its large crowded booth, and they contrasted sharply with the 65XE game machines complete with light guns.

A third party ST drive from Future Systems, the successor to Indus, was being shown, and it looked just like a mini-Indus for 8-bit, jet black with LEDs but maybe half the size of a standard Atari ST drive. Eight bit Indus drives could make a comeback because of Atari's sales policy to dealers which requires them to buy one computer and one disk drive as a package. How can a loyal 8-bit supporter add an extra drive to his system?

After the show Sandi told WACO that Atari would be interested in coming back to Pittsburgh for another show since one was being considered.

The ripple effect of the success of the Michigan show could be beneficial to other fairs.

Is Atari aspiring to become the next Radio Shack? The news spread quickly around the show that Atari bought the 60 store Federated electronics chain in the southwest in order to totally control its products from manufacturer to consumer.

SAGE's Earl Hill (a WACO PRINTOUT columnist) even pitched in at the WACO booth when it was shorthanded. Thanks, Earl.

Atarians may argue over whether to stick with the old 8-bit equipment or to climb aboard the ST bandwagon, but this show clearly demonstrated that the Atari world consists of both, bonded together by the Atari symbol, Darek Mihocka's Transformer notwithstanding.

The Computer Police Want YOU!

by David G. Grace

Special Agent for the United States

It was 5:00 AM in the modest suburban home. John Kelly was just completing the task of loading a fresh supply of tractor feed paper into his new dot matrix printer. He had temporarily halted the running of the program now in his computer. His monitor screen glowed red and contained only the cryptic message, "ProHackr Paused," in inch high letters. Under the printer was a cardboard box to catch the paper that had slowly rolled out of the printer over the past six hours. A light smile touched his lips as he thought of the telephone shopping spree he would be going on that weekend. Each sheet of the fan fold paper contained three columns of numbers, about fifty groups of numbers per column. Each group of numbers was a valid credit card number, followed by its current expiration date. This was all the data necessary to make purchases by phone. John had obtained the ProHackr program by downloading it from a BBS run by a high school kid out of his bedroom. The companion ".DOC" program had made it sound easy, and it was. He was known on the Board as "Machine Language Kelly" and often aided the kids in debugging the semifinished programs they often received from other boards.

Kelly completed his task and took the program off "pause," then turned his reddened eyes to the stairway leading back to his warm bed. As he crossed the room and reached for the light switch, the doorbell rang. Shocked to have a visitor at this hour, Kelly peered through the door's small window onto a porch dimly lit by the first light of dawn. He found himself staring into the eyes of a Patrolman from his town's local Police Department. But it was the sight of men beside and behind the Patrolman which was giving Machine Language Kelly his current wave of barely controlled nausea. They were large men wearing blue nylon windbreakers, emblazoned with a gold badge over the heart. Kelly could see that the shoulder of one of the men also was embroidered with the letters "FCP." The man announced, "Federal Agents with a Search Warrant, open the door!" It was then that Kelly noticed that the Agent on the porch was holding a revolver, and the one behind him was carrying a shotgun. "Don't shoot, C-Man," said Machine Language Kelly as he opened the door and

The Patrolman quickly checked Kelly and his recliner chair for weapons before having him sit down. The man with the shotgun crossed the room, entered the kitchen and opened the back door for two more men who had been waiting there. Each wore the blue jacket with the badge and letters of the Federal Computer Police. Satisfied that he had found what he was looking for, the first FCP man into the house walked over to Kelly. "What was that you called me when we came in?" "C-Man," said Kelly, "You know....Computer Cops." Kelly some how managed a weak smile. "C-Man," repeated the FCP Agent, as he returned his stainless steel .357 magnum revolver to its holster under his jacket. "I like that," he said, "I think the Director will like it too." His arm swept in the direction of the computer and the lightly ticking printer.

"This all goes!" he said to his men. He turned again to Kelly and said, "You're under arrest for violation of Federal computer fraud laws, but now it's my duty to advise you of your rights. You have the right to remain silent..."

This story may be fictional, but similar scenes are being played in real life. Recently, I wrote an article about Federal software copyright laws in which I presented what I hope was an objective description of both the criminal and civil legal limits. This included mentioning some Federal law enforcement agencies that enforced those laws, such as the Federal Bureau of Investigation, the Postal Inspectors and the Customs Service. There are dozens of Federal agencies enforcing the law because the agencies specialize in a particular job and have their own enforcement arm to carry it out. Only a very few agencies are strictly law enforcement oriented, with the FBI being the most notable. These agencies often share the enforcement jurisdiction of a set of laws, as mentioned above, but usually there is one agency which clearly has the primary jurisdiction for a particular class of crime. Who, then, are the Federal Computer Police? I think you'll be surprised.

Now if you commit a crime with a computer, there could be a dozen agencies which could investigate you. In addition to the ones mentioned above, any government agency having a computer you can hack into probably has a legal arm to catch you. These people are, however, unlikely to have much background in computers because computer related crimes are only a small part of their investigative workload. But a few take computer crime more seriously. In my experience, this is especially true of the Defense Department's Investigative Service, where Agents attend special schools for tracing evidence through computers. Of course, they have two basic duties in preventing computer crime. To keep their computers secure and to track contract fraud in private companies who deal with the Defense Department (like those who sell us hundred dollar hammers for driving thirty dollar nails, then collect a bonus to cover cost over-runs). Incidentally, I can't mention the DIS without passing on that they have a great track record for hiring the best-looking smart women (or is it the smartest good-looking women) in Federal law enforcement. But these computer whiz-kids aren't the ones who'll knock at your door if you're burning the midnight oil with your modem, a credit card hacker program and a list of main-frame access numbers. But who will?

They haven't been particularly active in the media, but certainly have been in the streets. They're a well-known agency, but not for enforcing computer related laws. Their men are relatively new to the home computer, but not the main-frame. They're often high-profile day to day, but usually low-profile in their investigative work. They enforce virtually every computer related crime you can think of, and a few more. These include thefts involving bank automatic teller machines, stolen credit cards, fraud involving telephone services like Sprint and MCI, and just about any hacker invasion of a main-frame you can name. They're looking for a few good men, and a computer background might be just the ammunition you need to ace out the next guy for a job. If they arrest you, the trip to jail will probably be the most secure you've ever taken. But who are those guys?

I'm sure you've seen, more than once probably, a cartoon in a computer group newsletter or magazine depicting the arrest of some home computer hobbyist by a pair of Computer Police. Although the caption underneath is different in every version, the look of the two Compu-Cops is the same. They're tall, wear dark glasses, and sport dark suits with revolvers bulging under the lapels. As whimsically as they may have been drawn, this accurately describes them as they are usually seen in public. They are the most accidentally photographed cops in America, simply because of where they stand. By now, I suspect that most of you have identified them by their more official name, they are the Special Agents of the United States Secret Service.

They may be best known for protecting the President and other dignitaries, but they also carry a law enforcement investigative load. For many years, this was limited almost exclusively to enforcing laws on stolen government checks or securities and the counterfeiting of currency (as depicted in the movie "To Live and Die in L.A." a story written by a former Agent). Recently, however, they have received a string of new laws which make them, as far as we computer hobbyists are concerned, America's Compu-Cops. They were involved recently, here in the Pittsburgh area, in the arrest of several juveniles and others for computer theft charges stemming from credit card phone purchases. As the case is still pending, I can't comment on the allegations or the investigative techniques used. But I do regularly cross forks at the Federal Building cafeteria with the Secret Service Agents working computer crime. I asked them if they had anything I should pass on to Atari users.

One Agent warned that hacker programs are proliferating in the BBS community which aid in the obtaining of literally hundreds of valid credit card numbers in a few hours or which provide valid numbers and codes for free access to on-line subscriber services and for making Sprint or MCI calls, all at the expense of someone else. I know, because I've been the victim twice in the last year. I didn't have to pay the bill that was run up, but I lost that service for at least three weeks each time. These programs, under various names like CCHACKER and VISAHACK, have been primarily written for use on the Commodore, but can be expected to show up in other versions and with other names. Even telephone numbers and first level passwords or instructions for Government main-frames (shades of "Wargames!") have been known to show up. I don't try them myself. Especially with the advent of a new device which registers the source of an incoming call immediately -- no more seven minute manual traces. In any case, the Secret Service is likely to hire a large amount of new Agents in the next two years. A Bachelors Degree is required, but a computer background could assure you of keeping busy when the Presidential Campaigns are over. If you'd prefer to run some of those hacker programs, and meet them under less cordial circumstances, they'll be happy to oblige. In either case, friend or foe, the Computer Police want YOU!



THE PRESIDENTS PAGE



On Speed and Accuracy

Hi there. Let's take a look at the relative speed and accuracy of our 8-bit machine. The Floating Point Mathematics Package is located at the beginning of the 10K ROM OS between addresses 55296 and 57343. Here reside the routines that allow you perform operations with real numbers. This is the FP package accessed by ATARI Basic and some other cartridges and programs. It is a bit slow and could be replaced by the Newell Fastchip in the pre-XL machines. The Fastchip enabled basic programs to run about 3 times faster. Basic XL/Basic XE and Turbo-Basic both have their own floating point packages which enable them to perform math functions up to 10 times faster. Speed is the bottom line in computing. My idea of programming consists of two steps:

1. Write a program that works
2. Make it go faster

Not much thought is given to the accuracy of the FP package, partly because it is not a problem in everyday household use and partly because the actual error is so small. How do we detect this error? One way is to use a function that has a reciprocal such as sin or log. For an extreme test you could use several functions in a polynomial equation. Set this up in a loop that adds or accumulates the error and the result will hopefully be a very small number that you can use for comparison. At the same time you can check the time it takes to run the loop. In my test, I used the square root of the square of the loop variable. Here is the program I used:

```
100 POKE 19,0:POKE 20,0
110 XERR=0
120 FOR N=1 TO 2000
130 TEST=N-SQR(N)^2
140 XERR=XERR+ABS(TEST)
150 NEXT N
160 TIME=PEEK(20)+256*PEEK(19)
170 SEC=TIME/60
180 ? "ERROR=";XERR
190 ? SEC;" SECONDS"
```

Note that I took the absolute value of TEST so that the errors didn't cancel out. I ran this test with three basics, the Newell Fastchip and two basic compilers. I also ran a similar program on my HP-41CX handheld

computer. (I should point out that the MMG Basic Compiler has separate run time packages for FP and integer math with the integer package running about 100 times faster.) Here are the results:

BASIC/OS	ERROR	TIME (M:S)
Atari Basic/ 800 XL	0.11047609	12:31
Atari Basic/ Fastchip	19.0295021	4:03
MMG Basic Compiler	0.11306677	11:36
Basic XE	0.00148112	1:20
Turbo-Basic	0.00096984	1:10
Compiled Turbo-Basic	0.00096984	0:58
HP-41	0.000099027	12:12

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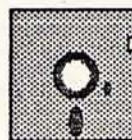
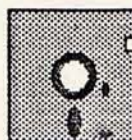
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PROGRAMMING TIPS AND TRICKS

by Earl Hill

Right up front I thought I should mention that this column is written for all the ATARI Computers except the new ST's. All those 800's, XL's, XE's, of the 8 bit type. Before the ST's, that went without saying, but not any more.. There are still lots of very interesting subjects to cover so we should not run out of material for a long, long time. The 8 bit computers themselves are so filled with marvels that it would take anyone many years to completely master them. I know a lot of you have seen those files on our D.O.M.'s called AUTORUN.SYS files. They are extremely useful, so I thought I'd discuss a little about what they are, what they do, and analyze a typical one.

You probably got your first look at the name AUTORUN.SYS when you looked at your Master Disk which came with your ATARI. That file was not as simple as the first ones we will discuss. An AUTORUN.SYS file does what it says, in a way. It AUTOMATICALLY RUNS a SYSTEM file. Now what's that all about? Well, an AUTORUN.SYS program is a machine language program which is used to do certain things when your ATARI disk drive is first turned on. What happens is that the operating system first loads DOS (the Disk Operating System) from disk, then runs AUTORUN.SYS if it finds such a program on the disk. These AUTORUN.SYS programs can do one or several things, depending on what the writer of them wanted.

The first AUTORUN.SYS files on the ATARI Masters were used to boot things such as the old 850 interface. Later on, other programmers got into the act and the first AUTORUN.SYS programs were written (mainly in machine language) to produce a BOOT disk which would automatically run a program which was written in BASIC. These were mainly collections of numbers produced from machine language code. They didn't allow many options, but just ran a BASIC program

which was a name like AUTORUN.BAS or MENU. If you didn't rename your file to one of these names nothing would work. Of course you could change the numbers in the BASIC code (if you could find the ones which spelled MENU or whatever - sometimes backwards) but that was sort of a hassle. What these programs did was store the machine language program output from the assembler onto disk as AUTORUN.SYS. These programs did not operate in all the same ways, but the net effect was the same.

To review, there are basically two different types of AUTORUN.SYS programs used. The first, on the ATARI DOS 2.0S Master boots the RS-232 device handler from the 850 Interface and then returns control to the Operating System. The second executes immediate mode BASIC commands such as RUN"D:MENU". More sophisticated programs were written which would do both of these things if needed. These later types of programs were in BASIC with machine language subroutines which automatically produced the AUTORUN.SYS file on the disk. They allowed you to put in any BASIC name you had a desire to run during the boot. This is the type we'll list a little later on.

An even more sophisticated Autorun.Sys maker came along later on. This was a super program which allowed you to put in all sorts of immediate BASIC commands to do all sorts of things real easy. These allow you to change screen colors, display a message like "Loading", and all other sorts of good stuff. These have been on the SAGE D.O.M., incidentally. I like one of these to call DOS itself - I use this as a master disk to go directly to the DOS menu. Another use for the AUTORUN.SYS program is to have it run an intermediate program (in BASIC) which in turn runs a main program. You can see this technique in the Horrorscope program which I wrote for the SAGE Challenge. One last thought, not all the programs create exactly the same type of binary file. Sometimes you have to try a couple before you find one that works with

different types of DOS's.

```
Here goes with our AUTORUN.SYS
Maker program:
5 REM ** AUTORUN SYS FILE PROGRAM **
8 REM ** DOS 2.0 ONLY **
9 ? CHR$(125):POKE 710,129
10 DIM A$(30),B$(20)
20
A$="RUN":A$(4)=CHR$(34):A$(5,7)="D1:"
22 POSITION 2,10:?"ENTER AS
FILENAME.EXT <RETURN> ":POKE
764,255:?"
24 IF PEEK(764)=255 THEN POKE
755,INT(RND(0)*4):FOR D=1 TO 30:NEXT
D:GOTO 24
30 TRAP 30:INPUT B$:TRAP 40000
32 POKE 755,2
35 A$(LEN(A$)+1)=B$
40 OPEN #1,8,0,"D:AUTORUN.SYS"
50 PUT #1,255:PUT #1,255:PUT #1,0:PUT
#1,6
90 L=61+LEN(A$)-1
100 PUT #1,L:PUT #1,6
120 FOR I=1 TO 61:READ D
140 IF I=12 THEN PUT #1,LEN(A$):GOTO
160
150 PUT #1,D
160 NEXT I
170 FOR I=LEN(A$) TO 1 STEP -1
180 PUT #1,ASC(A$(I,I))
190 NEXT I
200 PUT #1,252:PUT #1,1
220 PUT #1,254:PUT #1,1
240 PUT #1,255:PUT #1,5
260 CLOSE #1
270 END
320 DATA
169,18,141,33,3,169,6,141,34,3
330 DATA
169,10,141,128,6,76,105,243,251,243
340 DATA
51,246,33,6,163,246,51,246,60,246
350 DATA
76,228,243,0,172,128,6,240,9,185
360 DATA
60,6,206,128,6,160,1,96,140,33
370 DATA
3,169,228,141,34,3,169,155,160,1
380 DATA 96
```

This is a fairly short program, as most of these are. To start, line 9 clears the screen and adds a little color. After DIMensioning the two strings, we set up A\$ in line 20 to be RUN "D1:". In lines 22 and 24 we display a flashing prompt for the INPUT in line 30. This gets us the filename of the program which is to

be RUN by the AUTORUN.SYS binary program. The POKE 755 is a handy thing to make the cursor blink to get some attention. Line 35 concatenate (adds on) the filename to the RUN command. In line 40 we OPEN channel #1 to write a new file on the disk named AUTORUN.SYS. Lines 50 through 100 set up a two-byte hex FF binary header and the starting address (hex 0600, decimal 1536 [6*256]). Next, in line 120, we READ in the machine language code as DATA statements (there are 61 numbers). The remainder of the program is just housecleaning where the length of the BASIC statement is added to the machine language program and all this is written to the disk, becoming the AUTORUN file. Lines 260-270 CLOSE the channel and END the program. Lines 320-380 contain the machine language program which executes the BASIC command string which we have entered. And that's all there is to it.

If you want to see how this all works, type in this program and save it to disk. (Don't make any mistake in the numbers!). Pick the name of the BASIC program which you want to have run on boot-up. Then RUN this program and enter the filename you have selected to be run during the boot. Remember, this Autorun file will replace any Autorun file which might already be on the disk. You will now have an AUTORUN.SYS file on your disk which will execute the filename you have selected. The program to be RUN must have been one which has been SAVED to the disk in the first place. Incidentally. You also must have ATARI DOS 2.0S on the same disk. That's it for this month. Next month I thought I might discuss a routine to access the disk functions from BASIC. A very useful thing.

DEASIC has been upgraded faster than any commercial product ever was. A third revision was shipped to WACO in Sept, correcting the "cirset" and other bugs. Future revisions will be posted only on DTACK's BBS 505-989-9578.

ZOOMRACKS II- FILING RACK THAT ADDS

The term "database" often intimidates the typical graphic-oriented Atari owner whose mindset rejects any program that demands more than a half hour to master. Into this "unfriendly" ST and IBM user friendly market Paul Heckel of QuickView systems introduced a down-to-earth database which resembled the motorized coatracks at the local cleaners but much faster. Data management of information was reduced to the level of electronic card-flipping which sounds simple enough. The program ZOOMRACKS was named because the user zoomed in and out of racks of cards, and it instantly received much attention because of its unique metaphor.

When the WACO PRINTOUT and other newsletters noted the inability of the program to add and subtract fields, Quickview listened and developed ZOOMRACKS II. When others said the user-friendliness of the program was overstated, Quickview responded with templates, special satellite applications on disk to save time with predetermined formats, and with keyboard template overlays to prompt what keys do what since so many macros are built into the program. When upgraded Zoomracks II was announced at a price almost double that of the original program, some complained that the upgrade contained what the old version should have included in the first place. The price was eventually reduced to \$119.95 but is often heavily discounted. A whole series of template disks was announced at \$19.95 each, but unfortunately only two were ever released: the home starter kit containing 35 templates ranging from cataloguing videotapes and cents-off coupons to recording the family's health records and the business starter

kit to keep track of expenses, invoices, and inventories, a total of 37 templates and 47 output printing forms. With announced templates for sales, writing, project management, accounting, school academics, and more, ZRII promised to be the only database one needed to buy if he were buying just one, thus justifying its expense. (ZRII was demonstrated at a WACO meeting last winter, but publication of the review was delayed in order to survey more of the promised templates which never arrived. The audience learned that it is more powerful and thus more complex than reviews suggest.) Zoomracks II tries to be a compromise between simple mailing lists and the elaborate DBMan and VIP Professional. In this it succeeds although it is challenged by two cheaper newcomers in DBase 2 and DataRetrieve. There is no way to make a database entertaining so ST owners who spend their time playing games or copying programs may still find it overwhelming while experienced users of DBMan may consider ZR as unsophisticated. No single database will please everybody. We were still having difficulties after the first evening of use and accidentally stumbled upon how to load the templates (and then weren't certain how we did it) after repeatedly getting "Can't load file" messages.

Zoomracks II seemed to polarize public comment into either praise or complaint, but much of the negative criticism targeted the 180 page manual. For better or worse, the manual was revamped for the upgrade. For example, pages 5-6 of the old manual ended up in Appendix A of the new, and it almost seemed to assume that the user had read the old manual. Even with its revision, the manual is still a


reference manual and not a tutorial. Perhaps the two template disks mentioned earlier should be packaged with the main program along with step by step instructions to load and actually use one of the applications. To its credit the main disk does contain long-running demos stepped through via the F10 key. Of all the single and double keystrokes used by ZR, F1 is the user's salvation because it calls up the help menus. Also, a window at the bottom of the screen displays which keys are active at any time. The single-sided program disk is so full that medium resolution desktop info cannot even be saved to it, requiring preferences to be reset each time the disk is booted.

ZR is one of the databases for which commercial and public domain converters are available to port files from the comparatively slow 8-bit Synfile when Atari owners upgrade to 16-bit.

In simplest terms ZOOMRACKS II has nine racks or packs of cards which are divided into 27 fieldscrolls each allowing as many as 250 word processor lines of 80 characters each. In normal use there is no need to worry about running out of space for any item as with common databases. The upgraded version permits numeric information to be calculated on the screen so it is not just a text report generator. Certainly, the concept of ZR is to be commended for squeezing so much flexibility from electronic card racks, and we would hate to see the idea abandoned if sales decline. There are so many command options, however, that the user really has to do his homework with the manual even before trying to navigate through the demos or the templates, let alone customizing his own database. The rewards are

there for anyone willing to devote the time to it; shortcuts apparently aren't available. Yet, the first-time database user could benefit via a step-by-step simplified tutorial. More than one reviewer has found more shortcomings in the manual than in the program itself, and we couldn't think of any other features that should be added to the program.

Perhaps the best testimonial for ZR II is from registered owners. Almost half of them took advantage of the opportunity to trade in their old programs toward the purchase of the more expensive upgrade.

CUSTOMIZE YOUR ATARI ST COMPUTER			
EZRAM		Z-PORT	Z-TIME
Solderless 1/2 meg up- grade for your 520st. Installs in less than 15 minutes using a plug-in method.		Control the outside world with Z-port. A 23 channel digital I/O device.	Battery backed up clock/calendar on a chip.
<ul style="list-style-type: none"> - Illustrated instructions - Increases RAM disk size - Blitter compatible - 1 yr. warranty - Includes free software Back to school sale 15% off. Retail \$149.95		Z-PORT accesses the computing power of the ST directly, allowing computer management of lab equipment, high speed relays and almost any adaptable electronic device. Includes battery backed up clock.	Installs in minutes to give you 10 or more years of accurate time keeping.
To order: Contact your local dealer or direct from: TERRIFIC CORP. 1000 Main St. Brooklyn, MA 02146 (617) 232-2317		Order by Visa/MC/COD/Reply EZRAM, Z-TIME, Z-PORT are registered trademarks of TERRIFIC CORP. ATARI, 520, 520st, 1040 are trademarks of Atari Corp.	520 st \$49.95 520stlm, 1040 \$59.95 Apple and IBM versions available.
			

 * WEST MORELAND ATARI COMPUTER *
 * ORGANIZATION *

OCTOBER, 1986 LIBRARY DISK OF THE MONTH
 DISK #1

SIDE A-----

CUTELABL.OBJ--Use this utility along with the others on this disk to make cute little labels for disks, records, etc.

FLIPPER2.OBJ--This utility will flip and mirror your shoottool and printshop icons so that you can make fancy pictures for your cute labels.

PSPIC.OBJ-----This program will allow you to convert PRINTSHOP SCREEN MAGIC pictures from PRINTSHOP format to ATARI DOS format. Compiled in ACTION so you do NOT need the ACTION cart.

PSPRINT.OBJ---This program will print those PSPIC files.

SHOOTOOL.OBJ--This program will let you create icons for PRINTSHOP. Handlers to use Koalapad, mouse or joystick.

Side B-----

Side B contains the handlers for the joystick, Koalapad and mouse for side A. Also, 56 different fonts to use with your icon builder.

DISK #2

Side A-----

BACKTRACK.EXE--Palman alone with a twist. You can't go over an old path without losing points.

ALPMAN.EXE---Help the climber get to the top of the mountain. 2 players. 4 difficulties. A tuff one.

DUELIST.EXE---2 player duel to the death with lasers and grenades. Written in compiled ACTION.

SNOBALL.EXE---A simple yet fascinating game. Take into account for wind and size of snoball.

MOTRMAZE.EXE--Find your way out of a maze while on a motorbike.

Side B-----

COBBSADV.EXE--Text adventure that takes place in an old mansion. Looks pretty tough.

PERSEUS.EXE---Text adventure set in ancient Greece.

DRDADV.EXE----Did you ever want to know what was going on inside your computer? This adventure tells all.

LABYRNTH.EXE--Very difficult maze game with good graphics and great playability.

DOUBLE FEATURE AT TUESDAY, OCT. 13 W.A.C.O. MEETING

The recent and successful ATARI MAGIC Show was videotaped by one of WACO's Michigan friends (See report of show inside newsletter), and highlights will be shown at the Tuesday, Oct. 13 meeting at 7:30 PM. at UP Church of Covenant, Irwin. If you have any interest in a WACO EBS (plans momentarily derailed), come to this meeting. Jim Adamson will demonstrate the just released EBS Express ST, the ultimate BBS program, leading to the question of WACO raising money to buy ST equipment for a BBS if there is enough interest. (Many 8-bit programs can be stored on an ST EBS.) Express author Keith Ledbetter this program creates an almost uncrashable BBS. (See description below.)

BBS Express! ST is more than just another BBS; it is an advanced host communications system. BBS Express! ST was written by Keith Ledbetter, author of the popular Express BBS! and Express! series terminal programs which have become the defacto standard for 8-bit Atari computers. Express! programs are known for their 'user friendly' operation and bullet proof dependability.

BBS Express! ST takes Bulletin Board Systems into a new generation. Features include:

- full descriptions on all upload and download files
- threaded message bases
- up to 32 'IMS' trackable surveys
- advanced 'script language' processor
- complete online sysop maintenance
- fast, dependable file downloads with XMODEM or YMODEM protocols
- 40/80 column support
- color/monochrome operation; full color support to VT52 terminals



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